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Price of Parity (Comparison of U.S. and USSR Defense Expenditures)

914K0022A Moscow *SSHA: EKONOMIKA, POLITIKA, IDEOLOGIYA* in Russian No 5, May 91
(signed to press 7 May 91) pp 3-16

[Article by Sergey Mikhaylovich Rogov, doctor of historical sciences and department head at Institute of U.S. and Canadian Studies]

[Text] As we know, a state of military-strategic parity between the USSR and the United States was achieved during the course of the Soviet-American confrontation in the "cold war" years, and because the strength of armed forces depends on the economy, the correlation between their defense expenditures is of interest. How was the USSR, which was far inferior to the United States in terms of potential, able to achieve and maintain this military-political equilibrium?

For many years, according to official statistics, USSR defense expenditures totaled around 20 billion rubles. More complete data were published for the first time in 1989. At that time it became known that the earlier figures pertained only to the cost of maintaining the army and navy and that the total defense budget of the USSR in 1989 amounted to 77.3 billion rubles (see Table 1). Later the Soviet Union submitted more detailed information on its military expenditures, in the amount of 78 billion rubles, to the United Nations.¹

The total number of Soviet troops was also announced at the beginning of 1989: 4,258,000. On 1 January 1990 the figure was 3,993,000, which was approximately twice as high as the number of U.S. regular armed forces (2,133,000 personnel).² As far as arms are concerned, they numbered 63,000 tanks, 69,000 artillery systems, and 8,200 combat aircraft in 1989.³

These data testify that the Soviet defense budget differs considerably in structure from the American budget. The USSR has five branches of armed forces, while the United States has three. Whereas the American Army, Navy (including the Marine Corps), and Air Force are approximately equal in numerical strength—772,000, 790,000, and 545,000 personnel respectively⁴—in the Soviet Union the Army is the leader (1,596,000 personnel on 1 January 1989, or 37.8 percent of the total numerical strength of the armed forces), while the Navy has only 437,000 personnel (10.3 percent). There are no Soviet data on the other branches. According to Western sources, air defense troops number 502,000, the air force has 448,000 personnel, and the strategic missile troops (RVSN) number 287,000.⁵

The largest item in the Soviet military budget is arms and materiel purchases, while operating expenditures constitute the largest item in the U.S. budget. Whereas total capital investments—R & D expenditures, arms and materiel purchases, and military organizational development—represent over 66 percent of the entire defense budget in the USSR, the figure in the United States is only 42 percent.

The United States spends twice as much of its military budget (58 percent) than the Soviet Union (29 percent) on armed forces maintenance. The higher cost of maintaining a professional army is not the only reason. Another important reason is that the percentage of budget expenditures used for the maintenance of materiel and combat training is 29 percent of all military appropriations and is much higher than (twice as high as) the percentage of expenditures used for these purposes in the Soviet Armed Forces.

Therefore, the correlation between investments and routine expenditures on the maintenance of the armed forces in the USSR is the opposite of the one in the United States. This is a reflection of common tendencies in the USSR economy: The percentage of accumulations is too high in comparison to proportional consumption. The Soviet state budget puts too much emphasis on gross figures and capital investments and systematically underestimates the importance of the development of the infrastructure, particularly material and technical supplies, while keeping wages low.

This is probably part of the reason for such problems as the unsatisfactory conditions for the storage of military equipment, the high accident rate, the shortage of fuel and lubricants and of spare parts, etc. The more frequent recent cases of serious accidents in Soviet submarines are probably the result of this situation.

A comparison of the structures of defense spending also reveals the reasons for the inadequate social protection of the officer corps. The main problems here are their low wages and inferior living conditions. This has made the reduction of the combat readiness of armed forces and the decline of their prestige in society inevitable.

Ground troops make up almost half of the numerical strength of the Soviet armed forces in Europe (not counting strategic missile troops) and, as the largest branch of the service, occupy the first place in expenditures (around 29 percent), which are almost equivalent to the combined expenditures on the Navy and Air Force.

In the United States (as Table 1 illustrates), the situation is the opposite: Expenditures on the Air Force and Navy are higher than those on the Army.

Table 1. Correlative Expenditures on Branches of USSR and U.S. Armed Forces in 1989

Branches of armed forces	USSR		USA	
	billions of rubles	%	billions of rubles	%
Army	21.0	28.7	78.1	26.9
Navy	12.0	16.5	97.7	33.6
Air Force	12.3	16.9	94.7	32.6
Other branches of armed forces	16.8	23.0	—	—
Support	8.7	11.9	20.4	7.0
Pensions	2.2	3.0	—	—
Totals	73.1	100.0	290.8	100.0

One important consideration, however, is that the American Air Force performs several of the functions of the Soviet strategic missile and air defense forces (which are

included in the item called "other branches of armed forces"). The total expenditures on the Air Force and the air defense and strategic missile troops amount to almost 40 percent of the USSR defense budget, which probably reflects the state of Soviet-American strategic parity.

Ground troops also account for a disproportionately high percentage (around half) of expenditures on personnel and on operating costs and supplies (in the items combined as "army and navy maintenance"). The army also surpasses other branches of the armed services in terms of expenditures on arms and materiel purchases (see Table 2). Furthermore, the most money (2.3 billion rubles) is spent on ammunition. The next highest expenditure item is armored tank equipment (2.1 billion), followed by purchases of tactical and operational-tactical missiles (1 billion), electronics and communication systems (800 million), and artillery systems (400 million). Around 800 million rubles was spent in 1989 on other weapons for ground forces. Other purchases amounted to 1.9 billion rubles.

Table 2. Structure of USSR Military Budget Expenditures, %

Budget item	Army	Navy	Air Force	Other branches	Support and administration	Total
Personnel	53.7	13.5	14.1	17.7	1.0	100
Operating costs	46.3	13.9	8.4	8.3	23.1	100
Technical equipment	28.3	20.0	21.3	16.9	13.5	100
Construction	18.1	15.9	9.2	29.5	27.3	100
R & D	7.2	15.8	19.4	54.0	3.6	100

Source: PRAVITELSTVENNYY VESTNIK, 1990, No 45, p 9.

It is significant that strategic missile and air defense troops account for more than half of all expenditures on R & D and around 30 percent of the expenditures on capital construction, while the respective figures for ground forces are only 7 percent and 18 percent. The high proportional expenditures on support and administration in the "construction" category are also striking.

As Table 3 indicates, the correlation of operating costs and capital investments (arms and materiel purchases, R & D, and construction) is approximately 1:1 only in the army, whereas regular expenditures are far below investments in other branches of the armed forces: 1:3.85 in the navy, 1:3.7 in the air force, and 1:5.7 in strategic missile and air defense forces.

Table 3. Expenditures in Different Branches of USSR Armed Forces, %

Branches	Personnel	Operating costs	Technical equipment	Construction	R & D	Total
Army	23.5	23.8	43.8	3.8	5.1	100
Navy	9.9	12.4	53.7	5.8	18.2	100
Air Force	10.5	7.5	56.3	3.4	22.2	100
Other branches	9.7	5.3	32.7	7.7	44.6	100
Support and administration	16.1	28.7	50.7	13.8	5.7	100

Source: PRAVITELSTVENNYY VESTNIK, 1990, No 45.

The correlation between operating costs and expenditures on technical equipment is also significant. The indicator in the United States is equivalent to 1. In our country, on the other hand, the correlation for the army is approximately equivalent to 1:1.9, and in the high-technology branches of the armed forces the gap is even

wider: 1:4.4 for the navy, 1:6 for air defense and strategic missile forces, and 1:7.5 for the air force.

A comparison of military-economic conditions in the two countries based on official ruble and dollar exchange rates cannot be called objective. It is better to compare

levels of materiel production. Because there are no official Soviet data, we have to use American figures, which will provide us with only an approximate idea of military production in the USSR. Table 4 suggests that

the Soviet Union is far ahead of the United States in weapons production (with the exception of long-range cruise missiles). This is particularly true of weapons for ground forces.

Table 4. USSR and U.S. Production of Basic Types of Military Equipment

Types of equipment	1987		1988		1989	
	USSR	U.S.	USSR	U.S.	USSR	U.S.
Tanks	3500	950	3500	775	1700	725
IFV's and APC's	4450	800	5250	1000	5700	650
Field artillery	2250	298	2500	273	1850	147
Air defense artillery	100	0	100	0	250	0
Bombers	45	52	45	22	40	0
Fighter/attack planes	700	550	700	550	625	470
Helicopters	450	360	400	340	400	280
ICBM's	125	24	150	12	140	9
SLBM's	100	0	100	0	100	21
Shorter-range missiles	750	0	650	0	200	0
Long-range SLCM's	200	170	200	260	200	240
Short-range SLCM's	1100	570	1100	380	1100	180
SSBN's	2	0	1	1	2	1
Attack submarines	7	2	7	3	7	5
Aircraft carriers	0	0	0	0	1	0
Other surface ships	8	6	9	3	11	4

Source: "Soviet Military Power 1990," Wash., 1990, pp 38-39.

The publication of official Soviet data on expenditures on different types of weapons in 1989 provided a basis for a comparison of the approximate expenditures of the USSR and United States in these areas. It is true that this comparison will not be completely accurate because this item in the U.S. budget includes part of the cost of ongoing R & D, and because we still do not know all of the costs included in the item called "technical equipment" in our own military budget. Nevertheless, these data can give us an approximate idea of total expenditures on arms and materiel purchases.

A comparison of expenditures on the purchases of several categories of arms (armored equipment, aircraft, missiles, and artillery) in the USSR and the United States in 1989 (Table 5) indicates that the purchasing power of the ruble in the defense industry was equivalent to from 6 to 14 dollars, depending on the category of arms—i.e., our ruble was far from "wooden" in the defense industry, and it could even be described more accurately as "golden," especially in the aerospace industry.

Table 5. USSR and U.S. Expenditures on Purchases of Some Types of Weapons in 1989

Cost data	Airplanes and engines	Missiles and warheads	Armored equipment	Artillery
Expenditures				
1. USSR (millions of rubles)	3,098	3,873	2,169	431
2. USA (millions of dollars)	26,768	15,123	2,406	185
Production				
3. USSR	1,075	2,240	7,400	2,100
4. USA	762	630	1,375	147
Average cost per unit				
5. USSR (millions of rubles)	2.88	1.73	0.29	0.21

Table 5. USSR and U.S. Expenditures on Purchases of Some Types of Weapons in 1989 (Continued)

Cost data	Airplanes and engines	Missiles and warheads	Armored equipment	Artillery
6. USA (millions of dollars)	35.13	24.00	1.75	1.26
Ruble-to-dollar ratio	1:12.19	1:13.88	1:5.97	1:6.13

Source: PRAVITELSTVENNYY VESTNIK, 1990, No 45; "Soviet Military Power 1990," pp 38-39.

Although any calculations in which the qualitative differences between arms produced in the USSR and the United States are not taken into account, and in which several different types of weapons are combined in a single category (for example, ICBM's and tactical missiles), would have to be highly conditional, this example proves that *expenditures on arms purchases in rubles do not reflect the actual cost of these arms because arms prices in the USSR were artificially lowered to a fraction of the actual cost.*

In view of this, the disparities in the USSR defense budget between expenditures on purchases of military equipment and regular expenditures on armed forces maintenance are even greater, and the actual cost of arms is several times (eight times, according to some estimates) higher than the declared cost. By the same token, if prices were normal, the actual military expenditures of the Soviet Union would obviously be 2.5-3.5 times as high as the officially announced defense budget of the USSR in 1989 and 1990 (in view of the fact that actual expenditures on arms and materiel purchases represented just under half of the budget).

A comparison of data on the land owned by the USSR Defense Ministry and U.S. Defense Department is also interesting. According to PRAVDA, the USSR Ministry of Defense owns only 42 million hectares, not counting the 22 million which have not been confiscated from kolkhozes, sovkhozes, and tree farms, but are used periodically, during, for example, space launches. This is 2 percent of all the land available in the country. Besides this, 30 million hectares (of the 42 million) are state testing ranges which are also used by science and the defense branches of industry. The land used expressly for the stationing of troops and their combat training amounts to 10 million hectares.

The U.S. Defense Department has 11 million hectares for the permanent deployment of troops and for airfields and training fields and camps.⁶

It is obvious that the maintenance of strategic parity puts a heavier burden on the Soviet economy than on the American one. According to official data, defense expenditures represented 8.5 percent of the GNP of the USSR in 1989 and 7.6 percent in 1990.⁷ In the United States the respective indicators were 5.9 and 5.4 percent. As M.S. Gorbachev said, military expenditures absorb around 18 percent of the Soviet Union's national income.⁸ The proportion accounted for by military

expenditures in the union budget was even higher—31.7 percent in 1989, while it was 26.6 percent in the United States.⁹

In addition to all of this, the emphasis on gross figures and on the quantity of arms leads to losses of quality. Although the Soviet Union spent large sums to maintain its numerical superiority to NATO in several conventional arms for many years, it was not, in the opinion of many specialists, superior to the West in the combat potential of its armed forces.

The armed forces of the USSR still have large quantities of obsolete weapons. This applies not only to tanks, but also to many types of aircraft, such as the Tu-16 bombers, which were first demonstrated in an air show in Tushino back in 1953 (they were originally intended to be used for only 20 years). Even many of the modern Tu-22M combat jets in naval air regiments have already exhausted their potential and are standing idle for this reason.

A particularly difficult situation has arisen in the material and technical support of the army, obviously in connection with the insufficient funds for operating costs. "It appears that people in the army are used to repairing instruments, mechanisms, and cable systems with whatever is at hand rather than with the appropriate parts. The absence of the necessary spare parts in the necessary quantities has led to a situation in which violations of safety regulations are quite common,"¹⁰ KRASNAYA ZVEZDA reported. The chronic shortage of spare parts forces maintenance engineers to seek different ways of making aircraft usable. In particular, they have to "remove the necessary spare parts and completely serviceable instruments from completely serviceable machines."¹¹

The navy has had to "minimize the amount of time allotted for combat training" in order to maximize the service life of naval ships. The fact is that "although we have a high number of completely modern ships, we usually do not have a naval infrastructure meeting their needs."¹²

The situation has been complicated by the fact that "the present system of scientific investigations and the development, production, and operation of arms and materiel do not satisfy experimental design offices, industry, or the clients representing the different branches of the armed forces.... The army frequently receives military equipment of inferior quality, which then has to undergo a lengthy modification process." As KRASNAYA ZVEZDA reported, for example, "series-produced

planes (or their engines, weapons, targeting equipment, etc.) undergo constant modification." The Su-27 plane was tested in 1983, for example, but it was not adopted for military use until 1989. "The situation in the navy and in ground forces is the same."¹³

It would probably be interesting to see what Soviet military expenditures would be if they were to have the same structure as the American military budget. As Table 6 testifies, the "American structure" of defense expenditures would give us a considerable savings (of 11

billion rubles) on purchases of new weapons and materiel, on R & D (5 billion), and on military organizational development (3 billion). The savings would allow us to double the expenditures on army and navy maintenance (an increase of 22 billion) and on pensions (3 billion). The budget item called "personnel maintenance," could reach as high as 21 billion rubles, and with the numerical strength of the armed forces set at 4 million, the average serviceman could be paid around 5,000 rubles a year—i.e., almost twice as much as the average wage in the country.

Table 6. Soviet Defense Spending in 1989 (billions of rubles)

Items	Real budget	Hypothetical budget (based on U.S. figures)
Arms and materiel purchases	32.6	21.8
R & D	15.3	10.1
Army and navy maintenance	20.2	42.3
Personnel maintenance	6.8	21.0
Equipment maintenance	12.5	22.5
Military organizational development	4.6	1.5
Pensions	2.3	(4.2)*
Other expenditures	2.3	0.8

* USSR administration request.—Source: PRAVDA, 16 December 1989; 7 December 1990.

Back in 1988 a decision was made to shift the emphasis from quantitative "to qualitative parameters—both in reference to equipment and military science and in reference to the composition of the armed forces."¹⁴ Despite the unilateral reductions of Soviet armed forces and arms, announced on 7 December that same year, however, it turned out that although less money had been allocated for defense, the flaws in the structure of military spending were still present and were even more

pronounced. The defense budget for fiscal year 1990 (see Table 7) envisaged a further increase in proportional expenditures on arms and materiel purchases—from 42.2 percent to 43.7 percent. It is true that there was also a slight increase in expenditures on army and navy maintenance (from 26.1 to 27.3 percent), but payments of wages to servicemen were reduced by 7.4 percent (463 million rubles). There were also sharp cuts in R & D expenditures (from 19.8 to 18.6 percent).

Table 7. Dynamics of Soviet Union's Defense Expenditures

Items	FY 1989		FY 1990		FY 1991*	
	billions of rubles	%	billions of rubles	%	billions of rubles	%
Arms and materiel purchases	32.6	42.2	31.0	43.7	39.6	40.1
R & D	15.3	19.7	13.2	18.6	12.4	12.6
Army and navy maintenance	20.2	26.1	19.4	27.3	31.0	31.4
Military organizational development	4.6	6.0	3.7	5.2	6.2	6.3
Pensions	2.3	3.0	2.4	3.4	4.1	4.1
Other expenditures	2.3	3.0	1.3	1.8	5.2**	5.3
Totals	77.3	100.0	71.0	100.0	98.6	100.0

* USSR administration request.

** Including 3.3 billion rubles for social security program for servicemen.

Source: PRAVDA, 16 December 1989; 7 December 1990.

Judging by available data, there is serious reason to believe that *the savings achieved in this manner might have an adverse effect on the combat training of troops*. The number of divisional and regimental tactical exercises was cut in half. Whereas they were once held each year with each division and even with each regiment, now they are held once every 2 years at the most. Exercises involving the whole army or corps are not conducted.¹⁵

The high-technology branches of the armed forces are experiencing serious difficulties. According to press reports, "virtually no spare parts are being delivered for many of the planes used in the Air Force."¹⁶ According to KRASNAYA ZVEZDA, "the percentage of 'ship repair' funds has undergone considerable reduction in comparison to the overall reductions of defense allocations. The Navy has to finish paying for the ships, weapons, spare parts, tools, and accessories it has already ordered." Allocations will cover only 50 percent of the expenditures needed for ship repairs, even though around 20 percent of the navy's ships are already lacking the necessary (technical) scheduled maintenance.¹⁷

In addition, there is a clear tendency toward reduction—both absolute and relative—in R & D expenditures. In view of the West's present superiority in several technologies, the consequences of this could be irreversible for us. The military budget for 1991 effectively attests to the continuation of this tendency—expenditures on R & D are decreasing (by 23 percent, according to Deputy Chairman Yu. Samsonov of the Committee for Defense and State Security) while expenditures on purchases are increasing. Whereas the ratio was 1:2 in 1989, now it is almost 1:3, and by 1995 it will be 1:4.

Expenditures on arms and materiel purchases in 1991 should rise by almost a third (by 8.6 billion rubles) in the USSR. It is true that their proportional share of the defense budget will decrease slightly—from 44 to 40 percent. This is due to the substantial rise in expenditures on armed forces maintenance—by around one and a half times in current prices. According to available data, however, 9.4 billion rubles of the 11.6-billion-ruble increment (i.e., almost all of it) in expenditures on army maintenance will be absorbed by the higher prices of transportation, food, uniforms, fuel, and construction materials. Expenditures on the recall of our troops from abroad and on conversion to hard currency in settlements for the maintenance of the remaining troops there will rise by another 2 billion rubles.¹⁸

What is the reason for the rise in expenditures on arms purchases at a time when, according to a statement by Chief of General Staff of the USSR Armed Forces M.A. Moiseyev, the output of arms decreased by almost 20

percent in 1989 and 1990 and purchases of helicopters decreased by 60 percent, tank purchases decreased by 40 percent, purchases of IFV's and APC's decreased by 30 percent, purchases of combat planes decreased by 30 percent, and ammunition purchases decreased by 27 percent?¹⁹ (Deputy Chairman Yu. Matsak of the State Commission of the USSR Council of Ministers for Military-Industrial Affairs cited slightly different figures: The output of tanks was reduced by half and the output of IFV's was reduced by 65 percent.)²⁰ Arms and equipment purchases will decrease by another 20 percent or so in 1991.

The higher expenditures on purchases of military hardware were due to higher prices. The reduction of series production certainly raises the cost of equipment, and this is part of the reason why the price of tanks, for example, rose 14 percent. In 1991, however, the prices of military hardware will display another abrupt rise: A tank will cost more than twice as much, aircraft prices will be 1.5 times as high, and so forth. This will be a result of higher wages and the rising cost of raw materials and energy. In this way, the cost of arms and materiel will increase by 13.8 billion rubles.²¹

If we consider the tremendous reductions we will have to make in accordance with concluded agreements in the near future (by a factor of 2.5 or 3 for the main types of weapons), we have to think about what we should be producing, and in what quantities, so that we will not have to build things with one hand while breaking them with the other. What did it cost us to move approximately 60,000 tanks, IFV's, and guns to the other side of the Urals? This massive operation is fully comparable to the Americans' transfer of six divisions with reinforcement units (7.7 million tons of military hardware and ammunition) to Saudi Arabia at the time of Operation "Desert Shield" in fall 1990. In fact, the Americans are far behind us in terms of the quantity of transferred military hardware (under 10,000 units). Transporting just the troops cost the United States 2.6 billion dollars. This was hard to manage even for the Americans, who asked their allies to finance their military efforts with over 40 billion dollars. Who paid the bill for our transfers? After all, the USSR Supreme Soviet did not allocate funds for them and was not even notified of them.

Besides this, the current economizing is not being practiced in the most expedient areas.

The military reform program of the Ministry of Defense envisages less reform than a continued rise in military expenditures and a stronger emphasis on arms purchases, which will represent around half of the USSR defense budget (see Table 8). Proportional expenditures on armed forces maintenance will be cut even more.

Table 8. Projected Annual Defense Expenditures of Soviet Union (in billions of rubles, in 1991 prices)

Items	1991*		1991-1995		1995-2000	
	billions of rubles	%	billions of rubles	%	billions of rubles	%
Arms and materiel purchases	39.6	40.2	58.1	47.5	59.0	47.1
R & D	12.4	12.6	17.7	14.5	19.6	15.6
Army and navy maintenance	31.0	31.4	34.4	28.1	35.0	27.9
Military organizational development	6.2	6.3	5.6	4.6	5.4	4.3
Pensions	4.1	4.2	4.3	3.5	4.8	3.8
Other expenditures	5.2	5.3	2.3	1.9	1.7	1.4
Totals	98.6	100.0	122.4	100.0	125.4	100.0

* USSR administration request. VOYENNAYA MYS, special edition 1990, p 19.

The program anticipates the reduction of USSR armed forces to 3-3.2 million personnel by the end of the 1990s. Strategic nuclear forces and their personnel will be reduced by 30 percent, air defense troops will be reduced by 18-20 percent, army personnel will be reduced by 10-12 percent (but they will have to retain their "capacity for rapid deployment in the event of a heightened military threat to the USSR"), and the air force will be reduced by only 6-8 percent. As for the navy, its reduction is not discussed in the program.²²

This approach raises serious doubts in view of the fact that the treaty on conventional armed forces in Europe, signed on 19 November 1990, demands substantial reductions in the number of our ground troops. Before the beginning of the reductions, 1,187,000 servicemen (around 75 percent of the personnel of the USSR's ground troops) were deployed in this region. They were armed, as Table 9 testifies, with 132,800 tanks, armored vehicles and artillery systems.

Table 9. Reduction of Some Types of USSR Arms in Europe (thousands of units)

Arms	Number in 1989	Withdrawn	Remaining	Scheduled for elimination	Future number
Tanks	41.5	20.5	21.0	7.6	13.1
Armored vehicles	48.9	19.3	29.6	9.6	20.0
Artillery systems	42.4	28.4	14.0	0.8	13.1
Totals	132.8	68.2	64.6	18.0	46.2

Source: PRAVDA, 7 December 1990.

Now that the treaty has been signed, the arms of the USSR ground troops in Europe will be reduced by two-thirds. There could have been a corresponding reduction (instead of a reduction of 10-12 percent) in the number of their personnel. Considering the fact that ground troops also accounted for a significant part of the previously announced reductions of USSR armed forces in Asia in 1991 (200,000 men, 12 divisions, 11 air regiments, and 16 combat ships),²³ the total reductions should have amounted to at least 50 percent of the personnel of the ground forces, whose share of the current defense budget takes in almost half of all operating costs and over one-fourth of expenditures on the technical equipment of the Soviet armed forces.

Therefore, on our side:

First, there are plans for a relatively small quantitative reduction of armed forces, with insufficient concern about the enhancement of their qualitative indicators;

Second, the military-industrial complex does not plan to cut its expenditures and is even planning a further substantial increase over and above adjustments for inflation;

Third, the emphasis on purchases still exists and is growing stronger. Proportional expenditures on the maintenance of the army and navy in the military budget will be reduced even more, and this will exclude the possibility of solving the chronic social problems in the army and navy.

Therefore, there is still an emphasis on "gross indicators" in defense management, and this will not only affect the scales and depth of conversion, but will also conflict with the emphasis on qualitative, rather than quantitative, factors in guaranteeing the security of the Soviet State.

According to plans announced 2 years ago, USSR military expenditures were to have been reduced by 14 percent in 1991. The actual military budget in 1991, however, rose to 96.5 billion rubles instead of decreasing

to 66.5 billion. In other words, it increased by a factor of 1.5 in current prices and constituted 36 percent of the union budget (in contrast to 26 percent in 1989). Besides this, expenditures on border troops in the KGB budget will amount to 2.2 billion rubles in 1991,²⁴ whereas all expenditures on "militarized forces" (the border guard and internal troops of the Ministry of Internal Affairs and the training centers of DOSAAF) in 1989 amounted to 1,862,000 rubles.²⁵

Therefore, total military expenditures, including the budget of the KGB border guard and the internal troops of the Ministry of Internal Affairs (the expenditures of the ministry as a whole will amount to 5.6 billion rubles)²⁶ and so forth, are likely to exceed 100 billion rubles. This is an unprecedented figure for a time of peace. Only a few states in the world have such a high

percentage of military expenditures in their state budgets (they include Iraq prior to its aggression against neighboring Kuwait).

For the sake of comparison, we should note that although the treaty on conventional armed forces in Europe had only a slight effect on the American Armed Forces, the U.S. military budget was subjected to sharp cuts. Pentagon appropriations were reduced by 4.5 percent in current prices in comparison with 1989, but in constant prices the figure was almost 11 percent. Furthermore, the most substantial cuts were in arms and materiel purchases—15.4 percent in current prices and 21.5 percent in constant prices. Incidentally, this is completely comparable to our decision to reduce the defense budget by 14 percent, or by 10 billion rubles, in 1990-1991 in comparison with 1989.²⁷

Table 10. U.S. Defense Department Appropriations by Budget Items (in billions of dollars, in current prices)

Items	1989	1990	1991*	1991**
Personnel	78.5	78.5	79.1	78.4
Supplies and equipment	86.2	86.8	90.1	85.7
Arms purchases	79.4	82.6	77.9	67.2
R & D	37.5	36.8	38.0	36.2
Military organizational development	5.7	5.3	5.6	5.3
Housing	3.3	3.3	3.5	3.4
Totals	290.8	291.4	295.1	277.6

* Bush administration request. ** FY 1991 Defense Appropriations Act.—Source: D. Cheney, "Report to the President and the Congress: Action on the FY 1991 Defense Budget; Authorization and Appropriations," Washington, 7 November 1990, p. 6.

The Bush administration's request for fiscal year 1992 envisaged the reduction of Pentagon appropriations to 278.3 billion dollars. It is true that this figure does not include expenditures on the war in the Persian Gulf, which were financed mainly by American allies—Saudi Arabia, Kuwait, Japan, and the FRG. The actual American expenditures amounted to 15 billion dollars.

The United States will reduce the number of its armed forces personnel by 200,000 in fiscal years 1991 and 1992 and reduce the total number to 1.6 million by 1996. The number of infantry divisions will decrease from 28 to 18, the number of naval ships will be reduced from 545 to 451 (including a reduction from 14 to 12 for aircraft carriers), and the number of tactical air wings will be reduced from 36 to 26 (a reduction of 700 planes).²⁸ Military appropriations for fiscal year 1996 will be 34 percent below the figure for 1985,²⁹ when the round of the arms race that was started by the Reagan administration reached its peak.

It is indicative that the United States decided to make these reductions in spite of its involvement in the large-scale military conflict in the Persian Gulf.

It is also indicative that the unilateral cuts in military spending announced by the Soviet Union on 7 December 1988 were to have reduced the figures in the

five-year plan by around 30 billion rubles.³⁰ In the United States, on the other hand, the expenditures planned by C. Weinberger in 1987 for the 5-year period of 1989-1993 in the amount of 1.82 trillion dollars in current prices were reduced by R. Cheney to 1.5 trillion—i.e., a reduction of 349 billion dollars (or 19 percent)—and the cuts in Pentagon appropriations by the Congress in fall 1990 should reduce this amount by another 60 billion dollars plus.³¹ According to Cheney, the present 5-year plan (up to 1996) is 370 billion dollars below earlier projections, and proportional military expenditures in the GNP will decrease to 3.6 percent—the lowest level since 1939.³²

For a long time our Ministry of Defense denied the decline in Pentagon appropriations in constant prices, which began in 1986, by asserting that military expenditures should be calculated only in current prices. Today, however, we must admit that U.S. military appropriations are decreasing in constant and current prices.

Now it is our military-industrial complex that is demanding the calculation of USSR military expenditures "in comparable prices and conditions." As a result, in 1991, an extremely difficult year for our economy, following the implementation of the INF Treaty, the signing of the treaty on conventional arms in Europe,

demanding the reduction of our conventional arms by one-half or two-thirds, and the probable signing of a treaty on strategic offensive arms, in accordance with which we will reduce our strategic nuclear forces by around 30 percent, and now that the substantial reduction of the output of the main types of military hardware has become possible, our military expenditures will rise by a factor of almost 1.5.

The gradual rise in the prices of arms indicates a tendency toward their closer correspondence to actual production costs. Under these conditions, the Soviet economy is unlikely to be able to produce 1.5 times as many military planes, 3.5 times as many missiles, and 5.5 times as many artillery systems as the United States. The radical reduction of our arms is dictated not only by signed agreements and future agreements on strategic offensive arms, but also by the state of affairs in our troubled economy, which could simply collapse under the weight of military production during the transition to market relations. If we want the economy to begin concentrating on consumer goods production, so that our culture will develop and our social security system will guarantee low-income population strata at least the minimum subsistence level, this production must be reduced. The two are simply incompatible.

There is no question that the maintenance of strategic parity places a heavier burden on the Soviet economy than on the American one. According to official data, defense expenditures represented 8.5 percent of the USSR's GNP in 1989 and 7.6 percent in 1990,³³ while the respective figures were 5.9 and 5.5 percent for the United States and while these expenditures represented around 3 percent of the GNP in most of the West European countries and 1 percent of the GNP in Japan. Military expenditures absorb around 18 percent of the Soviet Union's national income.³⁴ The percentage of military expenditures in the union budget is even higher—31.7 percent in 1989, while the figure in the United States was 26.6 percent.³⁵ As M.S. Gorbachev said, our country has "the most militarized economy in the world and the most gigantic expenditures on defense."³⁶ Unfortunately, there has been no change for the better in this sphere yet.

In 1991 defense expenditures will rise to 36 percent of the union budget. The Defense Ministry budget in 1991 was approximately equal to USSR expenditures to finance the national economy, science, sociocultural undertakings, the maintenance of law enforcement agencies, the Chernobyl clean-up operations, and the Aral program combined. It is twice as high as USSR government appropriations for national economic financing, 5.5 times as high as the financing for sociocultural undertakings (they will be cut by a third), and 6.5 times as high as the funding of civilian science.

Our defense budget for the 1990s does not take the actual economic potential of the Soviet Union or the change in the external threat to the Soviet Union into account. The dramatic rise in military spending at a time of a radically

diminished need for arms will probably nullify all of the anticipated advantages of the conversion of the defense industry.

Therefore, without radical military reform, the present volume and structure of USSR defense spending could intensify the country's economic difficulties without strengthening its defensive capabilities. There are already clear possibilities, however, for the restructuring of the military budget during the transition to reasonable sufficiency in the sphere of defense on the basis of qualitative instead of quantitative parameters. Apparently, *the general reduction of the defense budget should be accompanied by a change in the structure of military expenditures*, increasing the proportion of the Defense Ministry budget spent on the maintenance of personnel and equipment and the combat training of the armed forces. The funds for this can be obtained by reducing the scales of new arms and materiel purchases.

First of all, *new acquisitions of weapons and materiel should probably take the form of actual purchases by the Ministry of Defense from the military industry*, and not shipments financed by state grants, in which most of the terms are known to be dictated by the producer. By the same token, it appears that *funds for the acquisition of arms and materiel should be allocated to the Ministry of Defense by the USSR Supreme Soviet and included in its budget instead of the budget of industrial ministries*. After carefully defining its own capabilities, the Ministry of Defense could place orders (on a competitive basis wherever possible) in industry and pay for them out of its own budget.

Second, the Soviet Union's agreement to sizable reductions of conventional arms (tanks, other armored vehicles, artillery, and aircraft) and nuclear weapons (both strategic and tactical) suggests the possibility of, on the one hand, the substantial *reduction of purchases of new military hardware* and, on the other, a significant *increase in expenditures on combat training and the maintenance of equipment*, and the development of communication systems and the infrastructure as a whole. There is no question that the heightened combat readiness of our armed forces at a time of quantitative reductions will assign higher priority to expenditures on the proper maintenance of military hardware, the lowering of the accident rate, the combat training of troops, firing practice, exercises, etc.

Third, the reduction of arms and materiel purchases would make it possible to *pay more attention to the social problems of the armed forces, improve their qualitative composition, and give professional soldiers stronger social guarantees*. In particular, the housing crisis is extremely acute. In the army and navy, more than 173,000 servicemen have no homes. The number is rising because of the approximately 30,000 families from the southern, central, and northern groups of troops withdrawn from Hungary, Czechoslovakia, and Poland, and another 63,000 families of officers and warrant officers from the western group of troops, not counting the 13,000 bachelors

for whom dormitories will have to be built in the union.³⁷ Expenditures on housing construction for active and retired servicemen will have to be increased dramatically.

It will also be necessary to raise the pay of officers and warrant officers, and also of sergeants in the future. The general reduction of the number of armed forces personnel will be accompanied by a substantial increase in the percentage of well-trained professional soldiers. This will make it possible to raise the requirements for conscripts and to raise their pay slightly. High-quality military hardware can only be maintained and operated by high-quality personnel, and this will help to restore the prestige of the military profession in our society.

Fourth, we must not fall behind the United States in the sphere of military technology. If the present tendency toward increased purchases at the expense of military R & D is not reversed, the gap might become irrevocable within just a few years, as soon as the Pentagon begins acquiring a new generation of weapons. A defense budget envisaging the mass production of weapons which quickly become obsolete, while cutting expenditures on military science, will not provide any opportunity to prevent the lag. The reduction of the military threat will allow us to reorder qualitative priorities in our defense efforts.

Fifth, as the war in the Persian Gulf demonstrated, the decisive factor in contemporary warfare is not the number of weapons, but the integration of all components of military strength for the maximum effectiveness of armed forces. In my opinion, the traditional emphasis in our defense budget on attack systems and the insufficient concern for support systems and military command and control systems will not strengthen the country's defensive capabilities and are more likely to diminish them. The inevitable quantitative reductions of weapons will assign increasing importance to the balance of power in this sphere.

In general, as the comparison of the USSR and U.S. military budgets testifies, the prerequisites for the maintenance of military-strategic stability at lower levels of armament are becoming apparent. In my opinion, military reform in our country will guarantee reasonable sufficiency in the sphere of defense with lower expenditures, and this will necessitate the serious reconsideration of priorities in defense spending.

Footnotes

1. PRAVITELSTVENNYY VESTNIK, 1990, No 45.
2. KRASNAYA ZVEZDA, 8 April 1989; PRAVDA, 16 December 1989; "D. Cheney, Secretary of Defense. Annual Report to the President and the Congress," Washington, 1990, p 100.
3. KRASNAYA ZVEZDA, 7 April 1989.
4. Cheney, Op. cit., p 73.

5. "The Military Balance 1989-1990," London, 1990, pp 33-35.
6. PRAVDA, 11 January 1991.
7. VOYENNAYA MYS, 1990, No 6, p 12.
8. PRAVDA, 29 April 1990.
9. "SSSR v tsifrakh v 1989 godu" [The USSR in Figures in 1989], Moscow, 1990, pp 18, 19.
10. KRASNAYA ZVEZDA, 13 November 1990.
11. Ibid., 31 October 1990.
12. Ibid., 28 December 1990.
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14. "Materialy XIX Vsesoyuznoy konferentsii KPSS" [Materials of the 19th All-Union CPSU Conference], Moscow, 1988, p 117.
15. VOYENNAYA MYS, 1990, No 6, p 10.
16. KRASNAYA ZVEZDA, 31 October 1990.
17. Ibid., 22 January 1991.
18. TRUD, 21 December 1990.
19. KRASNAYA ZVEZDA, 6 November 1990.
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23. VESTNIK MINISTERSTVA INOSTRANNYKH DEL SSSR, No 18, 30 September 1990, p 21.
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25. PRAVITELSTVENNYY VESTNIK, 1990, No 45.
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27. VOYENNAYA MYS, 1990, No 6, p 12.
28. LOS ANGELES TIMES, 5 February 1991.
29. "FY 1992-1993 Department of Defense Budget Request," NEWS RELEASE, 4 February 1991.
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31. C. Weinberger, "Secretary of Defense Annual Report to the Congress," Washington, 1986, p 101; D. Cheney, Op. cit., p 101; S. Daggett, "The FY 1991 Budget Debate: How Much for Defense," Washington, 17 December 1990, p 4.
32. LOS ANGELES TIMES, 13 February 1991.
33. VOYENNAYA MYS, 1990, No 6, p 12.
34. PRAVDA, 29 April 1990.

35. "SSSR v tsifrakh v 1989 godu," pp 18, 19.
36. IZVESTIYA, 6 February 1991.
37. PRAVITELSTVENNYY VESTNIK, 1991, No 1.

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**United States and Naval Arms Control:
Experimental Forecast**

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[Article by Igor Vyacheslavovich Sutyagin, graduate student at Institute of U.S. and Canadian Studies]

[Text] The extreme militarization of international affairs has made the use of other, non-military means of settling conflicts difficult, and sometimes even impossible, but the world is gradually realizing how unacceptable this kind of militarized existence is. The efforts to solve the problems of military confrontation have become a matter of unremitting interest.

There have already been definite and quite significant achievements in this area. Above all, they include the Soviet-American Treaty on the Elimination of Medium- and Shorter-Range Missiles and the treaty concluded by the 22 states on conventional armed forces in Europe.

The last of these treaties suggests the need, if not for the reduction or limitation of naval forces, at least for the serious investigation of problems connected with them. The need for this is far from propagandistic: Naval forces can and do occupy a prominent place in the balance of power between the East and the West. The deployment of U.S. naval carrier forces, for example, increases the number of fighter-bombers and attack aircraft by 18-19 percent and the number of fighters and fighter-interceptors by 23 percent in the air combat forces of the United States and its allies near Soviet territory. The United States and NATO, in turn, are somewhat worried about the combat potential of the USSR Navy.

In other words, one of the items on today's agenda is naval arms control (NAC). The need for this has been acknowledged in the West as well. People in Norway, Iceland, and Denmark, for example, feel that it is time to begin talks on naval forces.¹ Some Canadian researchers have also advocated NAC. Some people in Great Britain and the United States have suggested that formal talks with the USSR would be preferable to the present unilateral naval reductions resulting from financial difficulties.² Therefore, it is probable that the United States might agree to some type of naval arms control.

It would seem that the Soviet Union could only applaud this development. Repeated declarations on a variety of levels have asserted that the navies of the United States and its allies pose a definite threat to the security of the USSR. For this reason, NAC talks are viewed in our

country as something unequivocally beneficial for the Soviet side. A detailed examination of the balance of USSR and U.S. power in the sphere of naval arms, however, leads to conclusions that differ considerably from the usual assumptions made in our press when the discussion turns to the naval superiority of the West (this article is an attempt to illustrate this premise).

By insisting on the commencement of talks on naval issues, we are taking the risk of becoming involved in the process of naval arms control before we are ready for it in the conceptual and technical sense. The implications for the Soviet Union might not be completely favorable.

In this context, the need to give up the ideologized approach to arms control is becoming vitally important. The indiscriminate use of slogans about the Western military threat in the actual pursuit of policy could influence the formulation of the Soviet position on disarmament and create difficulties for the USSR, not only diplomatic, but also political and even military.

There are countless examples, however, of this approach to disarmament issues. At the talks on conventional armed forces in Europe, for example, the Soviet Union insisted on the discussion of combat aviation, which was not originally included in the mandate of the talks. The people who were first to insist on the discussion of this topic were those who had difficulty giving up the idea of the alleged approximate balance between the Warsaw Pact in NATO in conventional arms. Gradually, through a long and agonizing process, the Soviet military leadership acknowledged our superiority in the numerical strength of personnel, tanks, artillery, and armored fighting vehicles....

Combat aviation was the last chance to save face and to hold on to this slogan without violating the mandate of the talks. We could launch into a long and detailed discussion of the methods that were used to attain this goal, but the result was that the Soviet Union will have to eliminate up to 1,300 combat planes to stay within the agreed limits.³ NATO, however, could increase the number by several hundred.⁴ If NATO's aviation does pose a threat to the USSR as great as the one cited by the military leaders who insisted on the inclusion of this topic in the talks, now we can judge the real value of the national security contribution of those who preferred to defend the myths they had invented instead of seeking the truth.⁵

Another myth of this kind is taking shape today. This time it concerns naval arms. There are constant references to the naval superiority of the West. This cannot be denied: The Navy of the USSR does not have the fighting ability of the combined naval forces of the United States and its allies. Those who are speaking and writing about this, however, frequently overlook a significant point: *The combat capability of the navy as a whole depends less on numerical strength than on the efficient functioning of the structures securing the use of*

*the navy in combat and on the quality of personnel training, command, and control.*⁶

It is entirely possible that we will realize one day that our efforts in the struggle for naval arms control led only to the preservation of the status quo on both sides: Obsolete warships but satisfied ideological aspirations and passions on our side, and powerful and modern navies on the West's side. The conceptual foundation for this is being laid, oddly enough, by the efforts of some Soviet military leaders to put most of the emphasis on comparisons of the numerical strength of Eastern and Western armed forces, including naval forces.

As we already said, there are signs that Washington might soon realize the possibility of deriving certain political benefits and even military advantages from some forms of NAC. In this context, the attempt to predict possible U.S. proposals in the sphere of naval disarmament seems relevant. We should pay special attention to the proposals that would allow the United States to make use of the Soviet side's obvious adherence to old slogans in order to diminish the strength of the USSR Navy.

An analysis of available data suggests the following package of American proposals, accompanied by the appropriate phraseology:

1. *Naval arms control should be based on the same principles that proved to be effective in the disarmament process on land.* These principles are the following:

the limitation and reduction of the physical means of naval warfare—i.e., naval arms and equipment;

the limitation and reduction of the most offensive types of naval arms first;

the reduction of the main types to equal levels.

Obviously, the formulation of this set of NAC principles by the United States should meet with the approval of the Soviet Union because all of these premises are vigorously defended in Soviet foreign policy as an impartial basis for disarmament. The careless or excessively ideologized adherence to these principles in the naval sphere, however, could produce results differing substantially, as we will demonstrate below, from the presumed results of simple adherence to the assumption of the West's naval superiority.

2. *The naval forces of the USSR and United States should gradually be reduced to equal levels.*

There is no doubt that there will be heated debates in the USSR over the question of whether the USSR Navy should be compared to the navy of only the United States or the combined naval forces of the United States and its allies. It is also obvious that Soviet military leaders will want to compare the strength of the Soviet Navy to the combined numerical strength of the navies of the United States and its allies.⁷ Because the geography of the arms control process is necessarily global in

view of the ease with which naval units can be transferred, however, the declaration of this position would be tantamount to the USSR's announcement of its right to have a navy numerically equal or comparable to the combined navies of virtually all states with naval forces of any appreciable size.⁸

In this case, the Soviet Union's statements about the need for naval arms control might sound hypocritical, and then the reduction of naval arms, which is genuinely necessary to the USSR, as we have already pointed out, for practical reasons, and certainly not just for propaganda purposes, will be complicated, if not precluded, by the efforts of our own advocates of "stronger defense capabilities."

The author agrees completely with the need to consider the global balance of power and capabilities. The only point on which he disagrees with the probable stance of the military leadership is the absolute need to equalize all potential threats at once.

3. *Imbalances in the most offensive types of naval arms, posing the greatest threat to stability, should be eliminated during the first stage of naval arms reduction. These are sea-launched tactical nuclear weapons, naval strike aviation, and amphibious warfare ships.*

These—nuclear weapons, naval aviation, and amphibious warfare forces—are defined in the Soviet Union as the main elements of the threat to our country from the sea in wartime. This is a completely valid assessment.

In the United States the main threat to naval forces is considered to be the USSR Navy's land-based missile-armed aircraft and missile-armed antiship systems. The United States' NATO allies (the FRG and Turkey) are worried about the amphibious landing potential of our navy. Therefore, the attempts to use the opportunity to limit precisely these components of the USSR Navy will be understandable.

4. *During the first stage the sides would stop the peacetime deployment of tactical nuclear weapons on ships and keep them in coastal storage facilities. The sides would record this in parallel and unilateral, politically binding declarations.*⁹

It is primarily because of the difficulty of verifying the observance of agreements of this kind¹⁰ that the United States would probably insist on parallel and unilateral, politically binding declarations on this matter.¹¹ In this case, its ability to deploy naval nuclear weapons at a time of crisis would not be limited, and in the area of non-military deterrence, Washington would have an additional means of giving the Soviet Union a "signal" of its determination and of the seriousness of its intentions.

By the same token, the removal of tactical nuclear weapons from the ships of the USSR Navy, according to Western experts, would diminish its potential for "first-volley warfare" against the American Navy and would

eliminate the worries about this possibility. The Soviet side, however, would also have less reason to fear a surprise nuclear strike from U.S. ships with carrier-based aircraft and long-range cruise missiles.

5. The attack aircraft (bombers, strike aircraft, and fighter-bombers) of the USSR Navy's land- and sea-based aviation and the U.S. Navy's carrier-based aviation, as well as the forces securing the use of strike aircraft in combat (electronic warfare (EW) aircraft and tanker aircraft), should be reduced to equal numbers during the first stage.

Today, however, the navies of the USSR and United States (not counting the aircraft of the Marine Corps) have an approximately equal number of the planes defined above as "attack aircraft," with a slight advantage on the USSR's side. The number of aerial tankers is approximately equal on both sides. The inclusion of EW aircraft increases this advantage considerably, bringing the ratio up to 1.18:1 in the USSR's favor (see Table 1).

Table 1. Strike Component of U.S. Navy's Carrier-Based Aviation and USSR Navy's Sea- and Land-Based Aviation*

Aircraft	USSR	USA
Land-based medium bombers	355	—
Sea-based attack aircraft	104	538
Land-based fighter-bombers	85	—
All strike aviation	544	538
EW planes	185	64
Tanker aircraft	46	56
Totals	775	658

* Not counting air force planes supposedly transferred to naval command.—Source: "The Military Balance 1989-1990," London, 1989, pp 11-42.

The proposed inclusion of EW aircraft and aerial tankers in the total number of forces sounds completely valid to specialists. According to the present practice, EW aircraft are always included in the combat formations of attack and bomber aviation and perform some combat functions autonomously. The EA-6B carrier-based EW planes, for example, are equipped with HARM missiles for the neutralization of enemy air defense systems. Aerial tankers are usually converted combat planes which secure the use of strike aircraft with a maximum payload throughout the operating radius.

These considerations served as grounds for the inclusion of combat support aircraft in the overall ceilings for combat aviation in the treaty on conventional armed forces in Europe. According to paragraph "K" of Article II of the treaty, the term "combat plane" signifies a plane with a fixed or variable-sweep wing, armed and equipped for the destruction of targets with guided missiles, free-flight missiles, bombs, machine guns, cannons, or other

weapons, and any other model or version of this plane performing other military functions, such as aerial reconnaissance or electronic warfare. This precedent will be an important argument in favor of the inclusion of EW and tanker aircraft in the numerical strength of naval aviation.

Plans are being drawn up in the United States, however, for the reduction of the number of carrier forces and a corresponding reduction in the number of carrier-based attack aircraft, which could be as high as 18 percent of the present number. This would also entail the removal of specialized tanker aircraft from operational status. The U.S. Navy (not counting the Marine Corps) has no permanently land-based bombers and strike aircraft at this time and does not plan to have any in the future. Therefore, the number of attack aircraft and EW planes could be reduced to only 70 percent of the present number of Soviet naval aircraft in the foreseeable future if the program for the reduction of the U.S. Armed Forces is implemented. The added reduction of Soviet naval aviation by a third would be of certain benefit to the United States.

The number of combat jets in land-based naval aviation is also being reduced slightly in the USSR. This is occurring because the new Tu-26 planes are replacing the obsolete Tu-16 planes at a rate below 1:1. The news media in the West and in Eastern Europe, however, have been reporting that some of the MiG-27, Su-25, and Su-24 planes from the Air Force units recalled from East European countries are being, or will be, transferred to the USSR Naval Command.

In May 1990, for example, Hungarian radio reported that an air regiment of Su-24 front-line bombers (39 planes) withdrawn from Hungary had been redeployed near Murmansk¹² and had been turned over to the jurisdiction of the Navy.¹³ The latest edition of the Pentagon's "Soviet Military Power" publication says that up to 275 planes from the units withdrawn from East European countries are already under naval command.¹⁴ If this is true,¹⁵ the balance in naval strike aviation is already tipping—and quite heavily—in favor of the Soviet Union and could change even more in the direction of increased Soviet superiority. In this context, the proposed limitation of naval strike aviation to equal levels would sound more and more appealing to the United States. The question of whether or not this would be beneficial for the USSR requires further investigation.

As far as the planes of the Marine Corps are concerned, the United States is almost certain to try to keep them out of the talks. There is already some indirect evidence of this. The pamphlet "Soviet Military Power 1990" says, for example, that the Soviet Air Force (which is, according to the treaty on conventional arms in Europe, superior to any other air force in Europe in terms of numbers) has been more active in perfecting the strategy of combat with sea targets in conjunction with naval aviation in the last few years.¹⁶ This could provide grounds for an attempt to link the planes of

the Marine Corps with the Soviet Air Force, and the Soviet Union could hardly be expected to agree to this.

The non-inclusion of the Marine Corps could be substantiated by the fact that, according to Western data, the USSR Navy has naval infantry units and another two motorized rifle divisions deployed near Murmansk and Arkhangelsk and two motorized rifle divisions on Sakhalin Island, trained, equipped, and intended for amphibious operations.¹⁷ Besides this, as the USSR Defense Ministry spokesman in the Soviet delegation at the talks on conventional arms in Europe reported when he presented data on the number of USSR armed forces in the treaty zone, another three motorized rifle divisions in the European part of the USSR are under naval command. Therefore, the United States could demand that these units of the Soviet Army and the Soviet naval infantry be regarded as the equivalent of the U.S. Marine Corps. It is possible that the American side might make this comparison to preclude any discussion of the Marine Corps by the Soviet Union. Nothing specific is known about the future of these divisions, however, because of the plans for the reduction of the USSR Armed Forces.

6. During the same stage the sides should begin reducing the number of fighting ships of the main types—surface ships of over 3,000 tons and submarines (with the exception of SSBN's)—to equal levels. The United States has taken the Soviet military's concern about the naval reserves into account¹⁸ and therefore feels the need to include the ships in the naval reserves of the United States and USSR among the ships of the main combat categories.

Today, as Table 2 illustrates, the total number of ships defined above as "ships of the main types" in the USSR Navy (394 warships) is slightly higher than in the U.S. Navy (366). Many (but not all) of the ships of obsolete design, however, have already been removed from operational status.

Table 2. Number of Ships of Main Types in USSR and U.S. Fighting Forces

Types	USSR	USA
Multi-purpose submarines	239	94
nuclear	122	94
Surface ships of over 3,000 tons (not counting amphibious warfare ships)	115	208
Amphibious warfare ships of over 3,000 tons	40	64
Totals	394	366

Source: "The Military Balance 1989-1990," pp 11-42; "Jane's Fighting Ships 1988-1989," pp 594-620, 706-745; Handler and Arkin, Op. cit., pp 8-32.

As for the reserve ships, the numerical superiority of the USSR Navy to the U.S. Navy is equivalent to 27 percent of U.S. naval numerical strength (see Table 3). Furthermore, the U.S. Navy is known to be planning reductions of 19 percent over the next 5-7 years.¹⁹

Table 3. Number of Ships of Main Types in Reserve

Types	USSR	USA
Submarines	around 55	3
Surface ships of over 3,000 tons	28	30
Amphibious warfare ships	—	2
Total	83	35
Total in regular forces and reserves	477	401

Source: "The Military Balance 1989-1990," pp 11-42; "Jane's Fighting Ships 1988-1989," pp 594-620, 706-745; Handler and Arkin, Op. cit., pp 8-32.

These figures should not frighten us, however. It is true that we cannot prove that the U.S. Navy has more ships of the basic types than the USSR Navy, but this does not mean that substantial quantitative reductions would not be in the Soviet Union's interest: Close to one out of every three warships in the regular forces of the Soviet Navy has already reached or will soon reach the end of its maximum service life.

7. The number of amphibious warfare ships (with the exception of landing craft and other landing vessels excluded from this category by the system of classification used in the two navies) should be reduced to equal levels as part of the reduction of the number of ships of the main types.

The Soviet side's consent to this would mean, first of all, the inclusion of many amphibious warfare ships of under 3,000 tons (see Table 4), including surface-effect ships (two of these types, known in the West as the "Stork" and "Sea Hawk," are also classified as "amphibious warfare ships" in the USSR Navy), among the forces to be limited. Besides this, the acceptance of this proposal would considerably limit the USSR's chances of achieving the final level by reducing the number of obsolete ships and ships in reserve. Leaving aside the question of the USSR's need for amphibious warfare ships, we must admit that limiting the freedom to choose a naval reduction program would not be convenient for the Soviet Union.

Table 4. Number of Amphibious Warfare Ships in Combat Forces

Categories	USSR	USA
All amphibious warfare ships	99	64
surface-effect ships	23	—
Assault troop accommodation, number of men	21,604	49,663

Source: "The Military Balance 1989-1990," pp 11-42; "Jane's Fighting Ships 1988-1989," pp 594-620, 706-745; Handler and Arkin, Op. cit., pp 8-32.

8. During the second stage the sides should begin reducing the total number of naval forces to equal levels. At this

point the fighting ships of more than 200 tons should be subject to limitation and reduction.²⁰

With a view to the expressed concerns about the role of the U.S. Coast Guard at a time of crisis,²¹ the United States will agree to the inclusion of the armed ships of the Coast Guard in the total number of U.S. fighting ships. The USSR figures will then include the ships of the naval units of the USSR KGB Border Guard and the armed auxiliary and service vessels performing guard and patrol functions comparable to those of the ships of the U.S. Coast Guard. Just as in the case of navy ships, ships with a displacement of over 200 tons will be counted.

The number of fighting ships with a displacement of 200-3,000 tons is almost six times as high in the USSR Navy as in the American Navy, even with the inclusion of the U.S. naval reserve (see Table 5).

Table 5. Number of Warships of 200-3,000 Tons in USSR and U.S. Navies

Displacement	USSR	USA
From 1,000 to 3,000 tons	86	1
From 500 to 1,000 tons	101	41
From 200 to 500 tons	180	6
Totals	367	48

Source: "The Military Balance 1989-1990," pp 11-42; "Jane's Fighting Ships 1988-1989," pp 594-620, 706-745; Handler and Arkin, Op. cit., pp 8-32.

If the armed ships of the Coast Guard, the naval units of the USSR KGB Border Guard, and auxiliary and service vessels are counted, the USSR has approximately four times as many ships (see Table 6). Their inclusion in the naval numbers today would produce a USSR-U.S. correlation of 2.13:1.

Table 6. Number of Combat and Armed Ships Outside USSR and U.S. Naval Structures

Categories	USSR	USA
U.S. Coast Guard	—	79
Naval units of USSR KGB Border Guard	168	—
Armed icebreakers and communication vessels of auxiliary fleet performing reconnaissance and patrol functions	51	—
Totals	219	79

Source: "The Military Balance 1989-1990," pp 11-42; "Jane's Fighting Ships 1988-1989," pp 594-620, 706-745.

Although we cannot exclude the possibility of this proposal, it is unlikely to be given any serious consideration in the United States. In the author's opinion, it would certainly be a mistake to insist on the inclusion of the Coast Guard (see Table 7).

Table 7. All USSR and U.S. Combat and Armed Ships Over 200 Tons, Counting Reserves

Categories	USSR	USA
In navies (counting reserves)	903	449
Outside navy structures	219	79
Totals	1,122	528

Source: The Military Balance 1989-1990, " pp 11-42; "Jane's Fighting Ships 1988-1989," pp 594-620, 706-745; Handler and Arkin, Op. cit., pp 8-32.

Our analysis suggests the following: The naval superiority of the West exists, but it does not depend on the number of ships. This is why the rhetoric about the "Western threat" should be discarded, so that a detailed plan for naval disarmament, free of outdated biases, can be elaborated. During this process, it will be extremely important to consider the role the U.S. Navy plays in the pursuit of U.S. policy in the "Third World." (The importance of this is corroborated by the scales and nature of the use of American ships in recent combat operations in the Persian Gulf.) Otherwise, the confrontation with reality might be extremely painful.

Footnotes

1. "Interview with Norwegian Defense Minister Per Ditlev-Simonsen," JANE'S DEFENSE WEEKLY, 21 April 1990, p 764.
2. U.S. NAVAL INSTITUTE PROCEEDINGS, September 1990, p 34.
3. PRAVDA, 7 December 1990.
4. According to data published in KRASNAYA ZVEZDA (9 January 1991), NATO has the right to increase the number of its combat planes by 870.
5. "The center for the coordination of views and the elaboration of directives (for arms limitation talks—I.S.) is located—I will divulge this secret—in the General Staff" (PRAVDA, 26 June 1990).
6. See, for example, "Sufficiency Formula," KRASNAYA ZVEZDA, 1 December 1990.
7. In an interview, Admiral F. Gromov, commander of the Red Banner Northern Fleet, said: "We must be completely aware of the differences between land and maritime theaters of military operations.... In a naval battle or a naval operation, the defensive side's combat capabilities must be approximately equal to the same indicator on the offensive side" (KRASNAYA ZVEZDA, 22 July 1990).
8. The truth is that even in its relations with the PRC, the United States is trying to make the Chinese navy capable of preventing USSR naval supremacy in the West Pacific (see J. Lehman, Jr., "Command of the Seas," New York, 1988, p 410).
9. This proposal was made in a paper by M. Brement, "Naval Arms Control and the Soviet Navy," which was

distributed at an international conference on naval arms limitation and maritime security (in June 1990 in Halifax, Canada).

10. The daily monitoring of the planes of land-based Soviet naval aviation to verify the absence of nuclear warheads for antiship missiles, for example, would be an extremely sensitive issue for the USSR. People in the United States realize this and do not seriously expect the Soviet Union to agree to this. Incidentally, this also applies to the United States.

11. The possibility that the United States might take this step is suggested by its removal of SRAM nuclear missiles from B-52 bombers on alert status in order to lessen the probability of incidents involving nuclear weapons (KRASNAYA ZVEZDA, 13 December 1990).

12. This was corroborated by KRASNAYA ZVEZDA (6 December 1990).

13. J. Handler and W. Arkin, "Nuclear Warships and Naval Nuclear Weapons 1990: A Complete Inventory," NEPTUNE PAPERS, No 5, September 1990, p 32.

14. "Soviet Military Power 1990," Washington, 1990, pp 85-86.

15. According to recent issues of the USSR Defense Ministry organ, this information is well-founded. The 10 January 1991 edition of KRASNAYA ZVEZDA, for example, mentioned the Su-24 bombers of the air forces of the Baltic Fleet. The statement of the Warsaw Pact Committee of Defense Ministers "On the Comparative Numbers of Armed Forces and Arms of the Warsaw Pact and NATO in Europe and Adjacent Waters" (IZVESTIYA, 30 January 1989), however, declared categorically that there was not a single Su-24 in the aviation of the USSR Navy. They are not included in the figures in Table 1.

16. "Soviet Military Power 1990," p 86.

17. D. Isby, "Weapons and Tactics of the Soviet Army," London, 1981.

18. See, for example, V.A. Galkovskiy, "The Role of Navies in International Relations," VOYENNAYA MYS, 1990, No 1, pp 66-78.

19. THE NEW YORK TIMES, 2 February 1991.

20. The ships of the naval units of the USSR KGB Border Guard, known in the West as "Stenka," have a displacement of 214 tons and are classified as "border guard patrol ships." The possibility of using this kind of casuistry cannot be excluded.

21. VOYENNAYA MYS, 1990, No 1, pp 66-78.

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Soviet-American Joint Ventures

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(signed to press 7 May 91) pp 114-121

[Article by Alla Yakovlevna Bulovinova, candidate of economic sciences and scientific associate at Moscow State University imeni M.V. Lomonosov]

[Text] On 1 July 1990 the total number of joint ventures (JV's) registered with the USSR Ministry of Finance exceeded 2,000.¹ It is true that the number of actually operating ones is much lower: according to different estimates, only 300-400.

The first JV's made their appearance in 1987—more than 20, including 2 with U.S. firms. In 1988 another 11 were formed with American firms, and the total number exceeded 200 in September 1990 (Table 1), but the number of operating enterprises is just over 30 (around 15 percent).²

Table 1. Dynamics of Formation of USSR-U.S. Joint Ventures in USSR

Year	Number of JV's in Sep 90	%	Incorporation fund, millions of rubles	%
1987	2	0.9	25.30	5.4
1988	11	4.7	20.39	4.4
1989	129	55.1	285.12	61.1
1990	92	39.3	135.56	29.1
Totals	234	100	466.37	100

The United States is one of the leaders, along with the FRG and Finland, in the number of JV's formed and the capital invested in them. Soviet-American JV's represent 12 percent of the total number registered in the USSR, and around 10 percent in total capital investments.

In terms of incorporation funds, however, joint ventures with Italian firms are ahead of the enterprises established jointly with U.S. and Finnish companies.

Most of the Soviet-American firms were established on a bilateral basis, but partners from other countries took part in the organization of more than 10: Austria, Finland, Italy, the FRG, Great Britain, Canada, Belgium, Switzerland, France, Singapore, India, Pakistan, and Poland. In some cases the same American firm has participated in more than one Soviet-American venture. This is true, for example, of the American Berus firm, which is a partner in Interlink and Intersignal. The SPEC Group (made up of English and American firms), which has gained a reputation in the Soviet market in the last 6 years for equipment deliveries and services, formed three Soviet-British-American ventures, including Spectrum, for the assembly of personal computers and the development of computerized workplaces, and Scrip, for the construction and operation of hospital complexes in the USSR.³

In 1989 and 1990 the consortium, a different form of cooperation, began to be developed for the achievement of currency self-sufficiency by means of the redistribution of currency revenues. In March 1989 an agreement was signed in Moscow on the formation of joint ventures by the Soviet Foreign Economic and American Foreign Trade consortiums. The first was made up of 22 enterprises and production associations in the USSR, and the second consisted of 6 giant corporations—Chevron, Eastman Kodak, Johnson & Johnson, Archer-Midland, Mercator, and Nabisco. Ford Motor dropped out of the deal at the last minute, as the American press reported, because it was afraid that the consortium would run into obstacles and ambiguous situations in the USSR. Then, however, the well-known Georgia-Pacific firm began negotiating its membership.⁴ The two consortiums are expected to form around 25 JV's, with total investments of 10 billion dollars.⁵

In May 1990 a protocol was signed at the 13th annual meeting of the American-Soviet Trade and Economic Council on cooperation between an American medical consortium and five Soviet ministries, including the ministries of the Radio Industry and Industrial Equipment. Giant American companies have joined this consortium: Amoco Performance Products, Inc., the world's leading supplier of the heat-resistant polymers needed for the development and production of medical and stomatological equipment, and Colgate-Palmolive, which is known in more than 100 companies in the world, including the USSR, for its personal hygiene products and household chemicals.⁶ The purpose of the consortium is to organize joint ventures in public health care in the USSR. The first JV for the production of medical equipment, medicine, and disposable syringes, for example, was formed in Kazan. These JV's are expected to export around 40 percent of their products.

The Federal Express firm, which delivers freight in 1 or 2 days to many international destinations, including locations in Europe, also joined the consortium. It also performs the service of flying the necessary specialists, instruments, and medicines to any part of the world for emergency assistance within just a few hours.⁷

Some of the American partners in the joint firms are among the top 200 U.S. companies. They include Combustion Engineering, a firm known in the USSR for its earlier contracted work with the Nizhnekamsk Petrochemical Complex. It took part in the formation of the first Soviet-American venture, the Pris enterprise. This firm, along with others, including some Japanese companies, is expected to manage the establishment of two huge petrochemical complexes in West Siberia at a cost of over 4 billion dollars. Their production volume will be twice as great as the combined volume of the Exxon and Shell petrochemical enterprises.⁸

The Chevron corporation, which is a member of the first American consortium, will secure hard currency revenues by exporting our oil and petroleum products to the world market.⁹ The income will be distributed among all

partners, and this will make the financing of imports of raw materials and consumer goods into the Soviet market and the crediting of joint projects possible. Eastman Kodak, another member, will assist in the organization of the production of floppy disks for computers in the USSR, equipment for medical analysis, and photographic equipment. Other members of the consortium will concentrate on the development of food products and pharmaceuticals.

Another electronics company, the well-known Hewlett-Packard firm, the leading producer of medical electronics, is investigating the possibility of a JV for the production of medical instruments in the USSR.

Small and medium-sized American companies are also becoming involved in the organization of joint firms. It is easier for them than for the large corporations to do this because of their flexibility and inclination toward innovation.

The Soviet partners in JV's are production and scientific-production associations, VUZ's, academic institutions, all-union scientific-research institutes, printing firms, publishing houses, specialized firms and trusts, cooperatives, cultural and artistic establishments, foreign trade organizations, and others. According to Ministry of Finance data, cooperatives have been more active in organizing Soviet-American ventures in recent years: Their number rose from 19 to 65 between June 1989 and September 1990. This tendency is characteristic of all the JV's formed with foreign capital.

According to Soviet specialists, this has occurred because the cooperatives are freer in their economic operations than state enterprises. Furthermore, they have shown more interest in the improvement of production technology and the renewal of the product assortment. In addition, cooperatives with their own accumulated funds hope to invest them profitably.

Cooperatives and scientific research institutes are eager to form JV's in personal computer and software production. The partners in Soviet-American enterprises in this field in September 1990, for example, included 28 scientific research institutes and 19 cooperatives.

The number of public organizations and establishments of various types among founders of JV's has risen recently. Other organizers are specialized banks, including the Moscow Commercial Bank, USSR Promstroybank, and the Kredit-Moskva Cooperative Development Bank.

Whereas the incorporation funds of the first JV's were contributed primarily (more than half) by Soviet partners, JV's in which the American side's share ranged from 50 to 75 percent were registered in 1989 and 1990.

According to available data, American partners have contributed just under half of the total incorporation fund of Soviet-American JV's, around 466 million rubles.

As the JV's develop, these funds are augmented, primarily with the profits from economic operations. The incorporation fund of the Dialog JV, which originally amounted to 15 million rubles, was increased to 100 million by a decision of the board.

The shares of partners also change frequently. In the Spectrum JV, there was not only an increase in the contribution of the foreign partner, but also a change in this partner's share of the incorporation fund. Whereas this partner once owned half, now the share is 80 percent.

Data indicate that American firms have not begun making large capital investments in the formation of JV's yet. This is due to the economic difficulties in the Soviet economy, particularly the absence of a wholesale market, the non-convertibility of the ruble, and the lack of protection for foreign investments, intellectual property, and so forth.¹⁰ The firms are cautious and want more favorable conditions for foreign investments. Minimum foreign participation in JV's is to be set at no less than 100,000 rubles and no less than 30 percent of the incorporation fund.¹¹

American-Soviet firms are being established in the fuel and energy, metallurgical, wood chemical, and machine-building branches, in the construction industry, and in business services, consulting, personnel training, advertising, and research and development. Many of the JV's are in trade and public catering, tourism, hotel and restaurant services, and public health care, as well as in light industry, printing, transportation, communications, and agribusiness. The sectorial divisions are somewhat conditional because many enterprises perform other types of work in addition to their main activities. In particular, the ones producing personal computers and software are also engaged in personnel training. Consumer goods production, medicine and public health care, trade and public catering, personnel training, and consulting and mediating services represent around 45 percent of the activities of USSR-U.S. joint ventures. This kind of intensive formation of JV's in the social complex and business services was possible because they do not require large capital investments and do recoup expenditures quickly, they create possibilities for the use of highly skilled specialists, and they will ultimately solve the acute problem of satisfying the demand for the basic types of services, including some non-traditional services in our country (engineering, consulting, and others).

The proportional number of JV's in industry, on the other hand, is under 20 percent of the total, although the largest enterprises are operating here. One is the first Soviet-American enterprises, Pris, founded in 1987 for the production of automated control systems for petroleum refining.

The number of JV's in the construction industry and agribusiness is much lower, but their incorporation funds are much larger than in other JV's.

Software development and the assembly of personal computers with imported components occupy a prominent place in the operations of Soviet-American enterprises. Whereas there were three in 1987-1988, 26 more were established in 1989, and in September 1990 there were already 55. Only one-fifth are operating, however, including Sterks Avtomatizatsiya, Layks, Spectrum, Sovmestnyy Put, Ideya, and others. One of the leading Soviet-American enterprises in this field is Dialog.

Basic Production and Product Sales

The Dialog JV is primarily engaged in the assembly of personal computers and the development of software for the domestic and foreign markets. During its 3 years of operations, Dialog expanded its network by opening branches in Leningrad and Perm and in Nakhodka in the Far East. Now Dialog has 14 subsidiaries and 21 agencies in different parts of the country. Their functions include the organization of joint industrial subdivisions, including subdivisions for computer assembly and software development, personnel training, commercial advertising, and others.

The firm is already selling computers in the domestic market. Sales in 1989 totaled 99,628,000 rubles. It is true that the JV's sales of personal computers in the domestic market were reduced perceptibly in 1990 in connection with the diversification of operations and a stronger emphasis on software development.¹² It buys components—just as other JV's producing computers—from foreign countries: Austria, the United States, the FRG, and others. The personal computers are assembled at the Kama Motor Vehicle Plant and in other subdivisions of the firm. In 1990 the Nakhodka and Kishinev subsidiaries sold their first products. The products are in great demand in different spheres of administration, research and development, technological processes, etc.

There has been some development in the activities of the special Dialog centers in the Central Economic and Mathematics Institute of the USSR Academy of Sciences (Stat-Dialog—the scientific consulting center for the statistical analysis of data), the Moscow Physical Engineering Institute, Moscow State University imeni M.V. Lomonosov, and the computer center of the USSR Academy of Sciences. The main focus of this activity is the development of specialized software systems and packages, teaching systems, and computer games.

Light industry occupies a special place in the activities of JV's in Leningrad. The Alba enterprise, engendered by an agreement between the Skorokhod Footwear Association and an American firm, Alba, Inc., produces and sells high-quality footwear in the domestic market. In 1989 and 1990 it sold around 400,000 pairs of leather footwear for over 10 million rubles. The enterprise sells part of its product for foreign currency.

Sovelan Aroma, founded by the All-Union Scientific Research Institute of Marine Fishing and Oceanography and an American firm, Elan International, uses imported raw materials (from the United States and Japan) and domestic components in the production of various flavor and aroma additives and uses them, for example, in the production of crab sticks at enterprises in Moscow, Leningrad, Tallinn, and Murmansk. In 2 years the enterprise has sold its products for the equivalent of more than a million rubles in foreign currency. It also sells its products for rubles. It has created a set of 100 different flavor and fragrance additives for the food industry (meat and dairy, confectionery, non-alcoholic beverages, etc.), for high-quality cosmetics, and for manufactured goods (including powdered detergents and so forth). The production and use of these additives is expected to produce a savings of around 30 percent in foreign currency. There have been certain difficulties, however, in the introduction of these products.

Soviet-American firms assign special importance to the construction industry. Perestroyka has already remodeled several facilities and earned a profit; Rus-Hotel is renovating and equipping the Solnechnyy hotel complex. Krovtech, founded by Soyuzpromstroykompleks and the American Carlisle Corporation, has done the construction and installation work for mass cultural, medical, commercial, and other public establishments. Moscow Project Management is doing the construction and installation work for hydraulic engineering and water management projects.

Data indicate that the total product of the Soviet-American firms operating in 1989 and 1990 was much greater than their imports (more than 13 times as great in 1989 and almost 7 times as great in 1990). They sell their products mainly in the domestic market. Whereas exports accounted for 7.1 percent of their total product in 1990 (9 months),¹³ sales in the USSR accounted for over 90 percent of the total. Furthermore, the products in the domestic market were sold mainly for rubles. In general, according to preliminary estimates, the sales of Soviet-American enterprises represented just over 6 percent of the sales of all JV's in the domestic market of the USSR in those 9 months of 1990 for rubles and for foreign currency, amounting to the equivalent of 2.4 billion rubles.

The exports of these firms consist of the enterprises' own products and products with no relationship to their main field of activity. Sovaminco, a printing company, exports ammonia. Its imports are of the same nature, consisting not only of printed materials from the United States, but also of spare parts for vans and passenger cars from the FRG, perfumes and cosmetics from France, tobacco from Finland, and other consumer goods. This is also characteristic in part of the Rantarin JV in the Far East. Although it exports its own basic products (horn and antlers) to the United States, it also purchases all-terrain vehicles and snowmobiles, consumer goods, including television sets and clothing, and medical instruments (from Japan) abroad.

Obviously, this is connected with the need to obtain foreign currency for normal business operations and for purchases of consumer goods abroad.

Geographic Distribution of Joint Ventures

Soviet-American firms are distributed unevenly in the USSR. Most of them (80 percent) are in the RSFSR. More than 60 percent of all the JV's are concentrated in Moscow (Table 2). This is connected with the developed social-production infrastructure and the presence of academic and scientific establishments, as well as highly skilled specialists to work for the JV's. For the same reasons, the number of JV's is comparatively high in the Ukrainian SSR—14, and in the Baltic republics—more than 10. After additional privileges¹⁴ were instituted for JV's in the Far Eastern economic region, joint business activity was expanded in the Far East.

Table 2. Distribution of Soviet-American Enterprises

Location of JV (city, union republic)	Number of JV's on 20 Sep 90	%	Incorporation fund, millions of rubles	%
Azerbaijan	2	0.85	7.10	1.65
Armenia	2	0.85	1.70	0.39
Belorussia	5	2.56	3.20	0.74
Georgia	7	2.99	4.84	1.12
Latvia	7	2.99	5.81	1.35
Lithuania	1	0.42	11.98	2.78
Moldova	2	1.28	0.70	0.16
RSFSR	153	79.9	349.32	81.25
Leningrad	9	5.12	13.92	3.23
Moscow	120	60.68	257.16	59.81
Uzbek SSR	1	0.85	0.30	0.06
Ukraine SSR	10	5.98	30.53	7.10
Estonia	3	1.28	14.41	3.35
Totals	234	100	429.89*	100

* There are no data on the total incorporation fund of some JV's registered in the USSR Ministry of Finance. In all, according to available data, the combined incorporation funds of Soviet-American enterprises amount to 466.37 million rubles.

The attraction of foreign partners is connected primarily with the development of the woodworking and fish industries, light industry, and the necessary infrastructure, including new railways and highways. More than 10 joint ventures with the PRC, Japan, and other Asian-Pacific countries have already been registered in this region. The joint ventures with Japan in Irkutsk and Sakhalin oblasts produce lumber, process seafood for sale in the USSR and the world market, and are arranging for public catering using the recipes and technology of Japanese and European cuisine and engaging in tourism and vehicle maintenance. Joint ventures with the PRC in Irkutsk and Barnaul plan to open Chinese restaurants and centers of Oriental medicine.

More than eight joint ventures have been formed in the Far East with American firms—in Khabarovsk, Vladivostok, and Magadan. Kamchatka Petfil hopes to restore and renovate the ships of the Far Eastern fleet, more than half of which are not seaworthy at this time. The SVZAL joint venture began operating at the beginning of 1990. It was founded by the Severo-Vostokzoloto Production Association and two American firms, including the Bering Straits Trading Company. Its production program includes steel smelting and equipment exports and imports.¹⁵

In spite of the definite advantages for mixed enterprises in the Far East, especially in the field of seafood processing, joint businesses there are encountering certain difficulties. One is the "closed" structure of the economy in the Far East. It is true that the region is now opening up: The need to develop its productive forces has become obvious. A special role has been assigned to the free economic zones, especially in Nakhodka—our country's year-round eastern port. American businessmen have also proposed the re-equipping of a military airfield on the outskirts of Nakhodka to accommodate civilian airliners.

The 3 years of experience in the organization and operation of Soviet-American JV's testify that this new form of USSR-U.S. cooperation is already being developed. The successful operation of these firms, however, will require the resolution of problems connected with material and technical supplies, the non-convertibility of the ruble, and personnel training.

Representatives of the two countries are trying to solve these problems together. The training of managers, including managers for joint ventures, was instituted on the basis of a long-term agreement with the American side. Courses in the business school of Duke University and North Carolina State University for enterprise managers include lectures on accounting, marketing, and personnel management and on-the-job training in the United States. Soviet specialists will be trained at Harvard University and in leading American companies, including Nabisco.

Export-import operations allow the JV's to acquire scarce items, crude resources, and materials abroad. They are trying to correct some of their own monetary problems by exporting products which are in demand in other countries but are not always directly related to the basic operations of these enterprises. Some of them are selling the products they purchase abroad in the domestic market for foreign currency. These operations have helped in filling the commodity market in the USSR with scarce products. This also applies to high-technology items, particularly personal computers and the components for them.

The perfection of the operating mechanism of free enterprise in the USSR is now particularly important. The president of the USSR's ukase on foreign investments in the USSR of 26 October 1990 regulates certain aspects of

foreign investment, the reinvestment of profits and the transfer of earnings abroad, the leasing of land and buildings, and the creation of free enterprise zones. In addition, however, the joint ventures need a more stable legal foundation in the areas of taxation, the protection of intellectual property, etc. It will be extremely important to establish preferential conditions for enterprises using foreign investments in priority fields of activity, particularly the JV's producing goods needed by Soviet enterprises and organizations. It will also be necessary to support the JV's that reinvest profits in the development of their own high-technology production for the improvement of the technological and organizational base.

The first phase of our experience with JV's is apparently over. Now we are entering another phase, during which we will have to pay much more attention to this form of cooperation if we want to turn it into a real business.

Footnotes

1. PRAVITELSTVENNYY VESTNIK, 1990, No 42, p 11.
2. PRAVDA, 28 May 1990.
3. BRITISH-SOVIET CHAMBER OF COMMERCE JOURNAL, 1989, No 10, p 22.
4. VNESHNYAYA TORGOVLYA, 1990, No 2, p 17.
5. THE CHRISTIAN SCIENCE MONITOR, 4 April 1989.
6. The others are Medical Service Partners, Pfizer, Inc., Hospital Corporation International, and Hewlett-Packard.
7. VNESHNYAYA TORGOVLYA, 1990, No 2, p 17.
8. FORTUNE, 31 July 1989, p 96.
9. The agreement signed in May-June 1990 on expanded cooperation between the Soviet Foreign Economic Consortium and the American Trade Consortium specifically envisages the exploitation of the Tengiz oil fields, which were supposed to be included in the Sovchevroil joint venture formed in the Korolevskoye oil fields (in Kazakhstan)—see VESTNIK MID, 1990, No 12, p 45.
10. Before 1 January 1991 foreign investors, including Americans, experienced some difficulties because of the absence of guaranteed rights and protection for foreign investments in the USSR. Now the "Fundamentals of Legislation on Investment Activity in the USSR," which went into force at the end of 1990, guarantee the

protection of investments regardless of forms of ownership, secure equal conditions for all investors, and stipulate the conditions and procedure for the export of invested valuables and profits—EKONOMIKA I ZHIZN, 1990, No 52.

11. JOINT VENTURE, 1990, No 1, p 45.

12. This is becoming typical of joint ventures with firms in other countries, which were also originally intended for computer production.

13. Calculated on the basis of the data of the State Committee of the USSR for Statistics.

14. In particular, the foreigner's share of the profits cannot be taxed or is taxed at a lower rate when it is transferred abroad.

15. RABOCHAYA TRIBUNA, 1 February 1990.

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Chronicle of Soviet-American Relations (March 1991)

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[Text] March

1—Foreign Minister A.A. Bessmertnykh received U.S. Ambassador to the USSR J. Matlock at his request. The discussion of the exact parameters of the political resolution of the situation in the Persian Gulf after the war was continued. The two sides also exchanged views on the content of the upcoming Soviet-American contacts on the political level.

9—The WASHINGTON POST reported that the U.S. State Department had drawn up a plan for the remodeling of the new American embassy in Moscow, "the construction of which was suspended for security reasons." The new plan envisages the demolition of the top floor of the unfinished building and the erection of three additional floors "for secret diplomatic activity."

14-16—American Secretary of State J. Baker was in Moscow for a working visit. The first round of talks between the secretary of state and USSR Minister of Foreign Affairs A.A. Bessmertnykh took place on 14 March. The state of affairs in the Persian Gulf and the Middle East was the main topic. The detailed discussion of this subject matter was continued by groups of experts.

The second round took place on 15 March. Items on the agenda included regional problems, bilateral relations (primarily economic cooperation), and disarmament issues.

15—President M.S. Gorbachev of the USSR had a meeting with J. Baker. They discussed the following topics in their 4-hour talk: the prospects for perestroyka

and economic reform in the USSR, the situation in the Middle East, problems with the ratification of the treaty on conventional arms in Europe, and others.

19—One of the permanent CSCE institutions—a conflict prevention center—was opened in Vienna. The heads of 32 European states and of the United States and Canada reached an agreement on its establishment at the time of the Paris summit meeting.

26—The ceremonial presentation of a painting by renowned American artist Gregory Perillo to the Soviet people was held in the Kremlin. Accepting the American artist's gift, member of the USSR Supreme Soviet and of the Soviet Cultural Fund board B. Oleynik expressed the deep gratitude of the Soviet people for this show of goodwill.

28—There was a serious fire in the American embassy in Moscow. The embassy almost lost all of its facilities for the transmission of information in code.

28-31—A group of American senators, headed by Chairman of the Senate Select Committee on Intelligence D. Boren, was in Moscow. During meetings with several members of the USSR Security Council and heads of the USSR Ministry of Foreign Affairs, the American senators discussed several matters of mutual interest.

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Articles Not Translated

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[Text]

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